



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: CF6-50CA BYPASS RATIO: 4.3  
 UNIQUE ID NUMBER: 3GE071 PRESSURE RATIO ( $\pi_{co}$ ): 27.8  
 COMBUSTOR: Low emissions fuel nozzle  
 ENGINE TYPE: TF RATED THRUST ( $F_{oo}$ ) (kN): 224.2

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>oo</sub> (g/kN) or SN	5.3	37.7	57.5	16.1
AS % OF ORIGINAL LIMIT	27.0	31.9	60.2	84.9
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			75.2	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			90.7	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			103.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			122.4	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>oo</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.281	0.14	0.44	28.03	11.4
CLIMB OUT	85	2.2	1.875	0.14	0.46	24.30	11.8
APPROACH	30	4.0	0.641	0.29	3.99	10.09	1.6
IDLE	7	26.0	0.163	2.72	24.04	3.40	1.4
LTO TOTAL FUEL (kg) or EMISSIONS (g)			751	784	6883	11116	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>oo</sub> (g/kN) or AVERAGE SN (MAX)				3.5	30.7	49.6	12.5
SIGMA (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				0.1	0.5	2.9	1.8
RANGE (D <sub>p</sub> /F <sub>oo</sub> in g/kN, or SN)				3.38-3.56	30.32-31.25	47.66-52.96	10.68-14

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.7-97.9
TEMPERATURE (K)	292.3-301.3
ABS HUMIDITY (kg/kg)	0.0127-0.0216

### FUEL

SPEC	Jet A
H/C	1.94
AROM (%)	16.3

MANUFACTURER: General Electric Company  
 TEST ORGANIZATION: GE Development/Production Test Operation  
 TEST LOCATION: Site IVD, Peebles, Ohio  
 TEST DATES: 28/07/1987-29/07/1987

### REMARKS

- Engine equipped with low emissions fuel nozzle config.
- GE Report R87AEB559.
- Engine 530375/001.
- Idle emissions calculated at normal idle setting rather than 7%.

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)